

**REMARKS**

The present amendment is in response to the Office action dated April 29, 2010, where the Examiner has rejected claims 1, 2 and 4 to 8 under 35 U.S.C. 112 and 35 U.S.C. 103(a).

Claims 1-8 and 21 to 26 are pending in the application following this amendment. Claims 9 and 16 to 20 were previously cancelled. Withdrawn claims 10 to 15 are cancelled without prejudice or disclaimer in the foregoing amendment. Claim 3 is withdrawn from consideration. Claims 1, 2 and 8 have been amended, and new dependent claims 21 to 26 which depend from claim 1 have been added. Claims 21 to 26 are directed to the elected invention.

Since the current Office Action is a final rejection, this amendment is being filed with a Request for Continued Examination and associated fee to ensure entry and consideration of the amended claims and the following remarks.

Reconsideration and allowance of pending claims 1, 2, 4 to 8 and 21 to 26 are respectfully requested in view of the above amendment and the following remarks. Since withdrawn claim 3 depends from generic claim 1 which is believed to be allowable, consideration and allowance of this claim is also respectfully requested.

**Claim Rejections – 35 USC § 112**

Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner comments that the recited subject matter in claim 1 directed to number input keys 0-9 arranged together to form a rectangular configuration is not found in the original disclosure, because Figure 2 shows the symbols “\*” and “#” contributing to the illustrated rectangular configuration. Claim 1 is now amended to define “a numeric keypad comprising a plurality of input

keys including number input keys corresponding to numbers 0-9, all the input keys in the numeric keypad arranged together to form a rectangular configuration and distinct from the left and right sets of one or more rows of alphabetical input keys.” This makes it clear that it is the input keys of the numeric keypad which form “a rectangular configuration”, and is consistent with the arrangement shown in Figure 2. New dependent claim 21 defines the input keys of the numeric keypad as further including input keys corresponding to at least two symbols, as shown in Figure 2.

Claim 2 is also rejected under 35 U.S.C. 112, second paragraph as defining “the left set of one or more rows of alphabetical input keys corresponding to letters Q, W, E, R, T, Y”, because Figure 2 shows the letter “Y” as being part of the right set of alphabetical input key rows. In the foregoing amendment, claim 2 has been amended to delete the letter “Y” for consistency with Figure 2.

It is submitted that the foregoing amendments in claims 1 and 2 overcome the rejections under 35 USC 112, first paragraph and clearly direct the claims to subject matter present in the specification as filed, and reconsideration and reversal of these rejections is respectfully requested.

Claims 1, 2 and 4-8 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, due to the definition of both “a centerline” and “a common centerline” in claim 1, with no cooperative relationship defined between the claimed centerlines. In amended claim 1, line 2, the mobile phone is defined as having “a centerline”. Reference to “a centerline” in previous line 6 (now line 7) is changed to “the centerline of the mobile phone”, and “a common centerline” (of the display, alphabetical keypad, and numeric keypad) is now defined in the last two lines of

amended claim as “comprising the centerline of the mobile phone”. It is submitted that this amendment makes it clear that the centerline of the mobile phone and the common centerline of the display, alphabetical keypad, and numeric keypad are the same line.

The Examiner also rejected claim 6 for its recitation of “the centerline” in line 4. Since there is no recitation of “the centerline” in claim 6, it is believed that the Examiner intended to refer to claim 8 in this rejection. In the foregoing amendment, claim 8, line 4 has been amended to define “the centerline of the mobile phone”. It is submitted that this clearly defines the centerline and is consistent with the amended language of claim 1.

It is believed that the foregoing amendments deal with the claim rejections under 35 USC 112, second paragraph, and reconsideration and reversal of these rejections is also respectfully requested.

### **Claim Rejections – 35 USC § 103**

Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,754,655 (“Hughes”) in view of U.S. Patent No. 6,023,147 (“Cargin”) in view of U.S. Patent No. 6,047,194 (“Makela”) and further in view of U.S. Patent Publication No. 2003/0063070 (“Kang”).

As set forth in MPEP § 2143, in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 82 USPQ2d 1385, 1395-97 (2007) the Supreme Court identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention

would have been obvious. The KSR Court noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.

To establish a *prima facie* case of obviousness under one rationale of the functional approach, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The combination of references cited against claims 1, 2 and 4 to 8 fails to teach or suggest “an alphabetical keypad including a plurality of alphabetical input keys corresponding to alphabet letters A-Z, the alphabetical keypad including a left set of one or more rows of alphabetical input keys and a right set of one or more rows of alphabetical input keys separated by the centerline of the mobile phone” combined with a numeric keypad “comprising a plurality of input keys including number input keys corresponding to numbers 0-9, all the input keys in the numeric keypad arranged together to form a rectangular configuration and distinct from the left and right sets of one or more rows of alphabetical input keys.”

Hughes (FIG. 13), Cargin (FIG. 13), and Makela (FIG. 1) all disclose mobile phones with distinct alphabetical and numeric keypads. However, the alphabetical keypads in each of these phones are arranged in continuous straight rows of keys. The

alphabetical keys are not arranged in separate left and right sets of rows, nor are the rows arranged in arcs to the left and right of a centerline of the mobile phone. In fact, the alphabetical keys are arranged in straight lines, not arcs, and the centerline of the mobile phone in each of these references intersects one or more of the alphabetical keys in each of these references.

In Hughes, the rows of alphabetical keys are continuous and are not separated into right and left sets of rows by the centerline of the mobile phone. The centerline of the phone as viewed in FIG. 13 bisects at least the alphabetical key corresponding to the letter G, as well as at least one other key in the same group of keys, and there is clearly no suggestion of separating the keys into separate right and left rows on opposite sides of the mobile phone centerline in Hughes. Similarly, the centerline of the mobile phone as seen in FIG. 13 of Cargin also bisects all of the keys in the central column of alphanumeric keyboard 318, and again there is no suggestion of separating the keys in the alphabetical part 322 of this keyboard into separate right and left rows on opposite sides of the mobile phone centerline. Instead, the alphabetical part of Cargin's keyboard is formed into a single rectangular array of horizontal rows and vertical columns of keys. FIG. 1 of Makela shows a similar arrangement to Cargin, with the vertical centerline of the phone 1 intersecting all of the alphabetical keys in the central column. Thus, none of these three references discloses or suggests alphabetical input keys separated into right and left sets of rows of keys separated by the centerline of the mobile phone. Instead, the centerline of the mobile phone extends through one or more alphabetical input keys in all three references.

Kang discloses a keyboard for a handheld electronic device such as a cellular phone which does not have distinct alphabetical and numeric keypads. Instead, the

keys in Kang are alphanumeric keys in which each key in the top row corresponds to both a letter and a number, and all of the keys are arranged in left and right sets.

In response to the Examiner's statement that it would have been obvious to use Kang's arced keyboard in place of Hughes keyboard "so that typing is optimized for the user's thumbs", if this proposed substitution is suggested by Kang for the alphabetical keyboard in Hughes, it must also be suggested for the numeric keyboard, since a user will be entering both letters and numbers in normal use of a mobile phone. Thus, the proposed combination differs from amended claim 1 which combines a numeric keypad in a rectangular configuration with a separate alphabetical keypad which has a left set of one or more rows of alphabetical input keys arranged in arcs and a right set of one or more rows of alphabetical input keys arranged in arcs. Instead, the proposed substitution would result in replacement of both the alphabetical and numeric parts of the keyboard in Hughes with the alphanumeric QWERTY keyboard of Kang, and thus would not result in the mobile phone keypad arrangement as claimed in amended claim 1.

A standard QWERTY keyboard has a top row of numbers followed by rows of letters starting with the letters QWERTY. The Kang reference combines the first two rows of such a keyboard into a single row of combined alphanumeric keys. Kang states that "Preferably, the two groups 6, 8 of keys 4 are designated as QWERTY keys, similar to those found on standard keyboards." (see lines 1 to 3 of paragraph 15). The entire emphasis in Kang is that all of the keys, both numeric and alphabetical, are arranged in the same pattern for easy thumb operation (see paragraph 19, lines 1 to 3). There is no teaching or suggestion in these references of extracting only the alphabetical keys in Kang and substituting those keys for the alphabetical keys in Hughes.

The Examiner states on pages 12 and 13 that combining the keyboard elements of the cited references or “the substitution of one known keyboard arrangement for another” would have yielded predictable results to one of ordinary skill in the art. Simple substitution of one known keyboard arrangement or keyboard element (e.g. that of Hughes) for another (e.g. that of Kang) would differ from the arrangement of amended claim 1. The keyboard arrangement of Kang is a standard QWERTY keyboard containing both numbers and letters in a single keypad (see paragraph 15 and Figure 5), with the numbers across the top row, and substitution of this keypad for Hughes’ arrangement would result in both numeric and alphabetical keys arranged in left and right sets of rows in arcs, not in the combination of an alphabetical keypad of left and right sets of rows of keys in arcs with a rectangular configuration of numerical keys below and separate from the alphabetical keypad.

It is therefore submitted that the combination of references proposed by the Examiner would not result in the mobile phone having separate alphabetical and numeric keypads as defined in amended claim 1. Claim 1 is therefore not obvious in view of Hughes, Cargin, Makela and Kang, and reconsideration and reversal of the rejection of this claim is respectfully requested.

Claims 2, 4-8, and 21 to 26 are distinguished from the references for at least the same reasons as stated above in connection with claim 1, and additionally since these claims define other elements lacking from the references.

In rejecting claim 2, the Examiner states that Kang discloses that the number rows and the number of number keys per row are variable to suit design preferences (paragraph 13). No such teaching can be found in paragraph 13 of Kwang. Instead, the first reference to numerical indicia is found in paragraph 15, where Kwang states that

additional indicia including numbers “may be imprinted on the bulbous end 20 of the keys 4”. FIG. 5 shows numbers on the top row of keys in a standard QWERTY layout, with number 1 above and to the left of the letter Q, number 2 above and to the left of the letter W, and so on, even though the number keys are combined with the first row of letter keys. Kang also states in paragraph 19, “Advantageously, the layout of keys 4..... is optimized for use by the thumbs.” Thus, the layout of both numeric and alphabetical keys is optimized as shown by Kang for use by the thumbs. One seeking to use the teachings of Kang in order to improve the keyboard arrangement in Hughes, Cargin or Makela would therefore use the left and right key layout taught by Kang for both the numerical and alphabetical keys, not only for the alphabetical keys. The Examiner has not provided any explanation of rationale for one skilled in the field to ignore Kang’s teachings of arranging both numerical and alphabetical keys along separate right and left arcs in a standard QWERTY layout, “optimized for use by the thumbs”, and instead to use this layout only for alphabetical keys. The subject matter of claim 2 is therefore also not taught or suggested by the references.

Referring to new claim 22, the combination of cited references fails to teach or suggest an arrangement of at least two left and right sets of rows in which “the first right-most key is spaced from the first left-most key by a first key spacing, and the second right-most key is spaced from the second left-most key by a second key spacing greater than the first key spacing”. Instead, the right most key in every row of Kang’s arrangement is spaced from the left-most key by the same spacing. The arrangement of three rows with the spacing between the right-most key and the left-most key in the third row being greater than the key spacing in the second row (see claim 23) is also not taught or suggested by Kang.



Referring to new dependent claim 26, there is also no teaching or suggestion in the references of placing a non-alphabetical input key on the center line of the mobile phone at “an intersection between the arcs on which the top row of alphabetical input keys of the left set and the top row of alphabetical input keys of the right set are located” (as seen in FIG. 2 of this application).

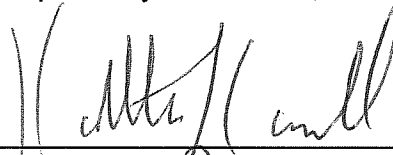
It is therefore submitted that claims 1, 2, 4 to 8, and 21 to 26 are all distinguished from the cited references, and reconsideration and reversal of the claim rejections based on Hughes, Cargin, Makela and Kang is respectfully requested.

**CONCLUSION**

It is submitted that claims 1, 2, 4-8 and 21 to 26 are now in condition in all respects for allowance, along with withdrawn claim 3 which depends from claim 1, and Applicant respectfully requests early allowance of the claims pending in the present application. Should the Examiner have any questions regarding the above amendment and response, the Examiner is invited to telephone the undersigned at the telephone number listed below. If necessary, Applicant requests, under provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application and to charge the fees for a large entity under 37 CFR 1.17(a). The Director is authorized to charge any additional fee(s) or any underpayment of fee(s) or credit any overpayment(s) to Deposit Account No. 50-3001 of Kyocera International Inc.

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Respectfully Submitted,

  
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